IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

JUNIPER NETWORKS, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 11-1258 (SLR)
	)	
PALO ALTO NETWORKS, INC.,	)	
	)	
Defendant.	)	

PLAINTIFF JUNIPER NETWORKS, INC.'S MOTION FOR JUDGMENT AS A MATTER OF LAW UNDER FED. R. CIV. P. 50(A)

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I. INTRODUCTION

Plaintiff Juniper Networks, Inc. ("Juniper") hereby moves, pursuant to Federal Rule of Civil Procedure 50(a), for judgment as a matter of law. Juniper brings this motion because "there is no legally sufficient evidentiary basis for a reasonable jury" to return a verdict in favor of Defendant Palo Alto Networks, Inc. ("PAN") on Juniper's claims of direct infringement.

II. LEGAL STANDARD

Judgment as a matter of law ("JMOL") is appropriate if "a party has been fully heard on an issue and there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue." Fed. R. Civ. P. 50(a). In making this determination, "the court should review all of the evidence in the record, not merely the evidence favorable to the non-moving party." *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150 (2000).

III. ARGUMENT

During the direct infringement phase of this trial, the parties put on evidence related to Juniper's claim that PAN directly infringes U.S. Patent Nos. 6,772,347 ("the '347 patent"), 7,107,612 ("the '612 patent"), and 8,077,723 ("the '723 patent"). Juniper asserts that PAN directly and literally infringes Claims 1 and 24 of the '347 patent, Claims 1 and 6 of the '612 patent, and Claim 1 of the '723 patent, or in the alternative directly infringes these claims under the doctrine of equivalents, by making, using, selling, and/or offering for sale in the United States, and/or importing into the United States, the accused PAN products that run PAN-OS.[1] As demonstrated below, based on the evidence presented at the trial, no reasonable jury could find

[1] PAN does not dispute that it makes, uses, sells and offers to sell the accused products in the United States. Moreover, the parties have stipulated that "PAN and some third party users of the PAN products use each of the accused products and features in the United States."

that the accused PAN products do not meet every limitation of the asserted claims, either literally or under the doctrine of equivalents. Accordingly, the Court should grant Juniper's motion for judgment as a matter of law.

A. No Reasonable Jury Could Find That The Accused PAN Products Do Not Infringe Claims 1 And 24 Of The '347 Patent.

Juniper's evidence establishes that PAN directly infringes Claims 1 and 24 of the '347 patent, and that no reasonable jury could find otherwise. Claim 1 is an apparatus claim directed to a "firewall engine" that uses a two-step process to sort and analyze packets. The first step uses a set of rules to sort incoming IP packets into "initially allowed packets" and "initially denied packets," and the second step uses a second set of rules that further sort the "initially denied packets" into allowed or denied packets. JTX 1 ('347 Patent) at Claim 1. Claim 24 is a method claim that similarly recites a technique for providing network security by receiving packets, processing packets into "initially allowed packets" and "initially denied packets," and then further processing the "initially denied packets" into denied packets and allowed packets using rules. *Id*. at Claim 24.

There is no dispute that the accused PAN products contain "a firewall engine" (Claim 1) or that they "receiv[e] incoming packets at a firewall" (Claim 24). Nor is there any dispute about the way in which the accused functionality works. Indeed, the parties agree that the PAN products use a two-step process in which the packets are first processed using a "Policy Lookup." If the packet matches any one of a number of defined allow rules during this initial step, the packet is allowed. If not, the packet matches the default rule referred to as the "Default Deny Rule." Packets that match the "Default Deny Rule" rule are then put through a second step in which the PAN system checks to see if they match a "special case" rule. If a "special case" rule applies (*i.e.*, if the packet is from a "captive" portal or is an "intrazone packet"), then the

packet is allowed; otherwise, the packet will be finally denied (i.e., "dropped"). *See, e.g.*, 2/28/14 (Vol. E) Tr. (Mitzenmacher) at 942:13–951:23; 2/25/14 (Vol. B) Tr. (Rubin) at 334:10–336:15, 342:4–349:27, 351:3–354:23, 355:12–25, 356:1–12, 371:2–372:10; 2/26/14 (Vol. C) Tr. (Rubin) at 438:17–440:22, 629:24–635:17.

The sole dispute regarding Claims 1 and 24 involves the first step of this process—specifically whether matching a "Default Deny Rule" at the initial step qualifies as an "initial denial." PAN's expert witness Dr. Michael Mitzenmacher claims that this is not an "initial denial" because the "Default Deny Rule" does not "set an action value to deny" for the packet (which is what the PAN product does when it is ready to "drop" a packet). The claims of the '347 patent, however, do not require that the "initial denial" involve setting an "action value to deny." To the contrary, the Court rejected PAN's effort to graft any requirement involving finally dropped packets onto the first, "***initial*** denial" step of the patented process: "Contrary to PAN's suggestion, the term 'drop' is consistently used in conjunction with ***finally*** denied packets . . . . The court declines to construe this term, and in accordance with Juniper's suggestion, the plain and ordinary meaning shall apply." D.I. 258 at 21 (emphasis added). Both parties agree that setting the action value to deny in the PAN products results in the packet being identified to be finally dropped, not just initially denied. *See, e.g.*, 2/28/14 (Vol. E) Tr. (Mitzenmacher) at 958:10–959:5, 961:12-16. Accordingly, based on the evidence presented at trial, no reasonable jury could find that PAN's argument is a viable defense to literal infringement of Claims 1 and 24 of the '347 patent.

Even if PAN were correct, however, the Court should still grant Juniper's motion because PAN has not submitted sufficient evidence to rebut Juniper's infringement claims under the doctrine of equivalents. Indeed, even if the claims required an action value to be set to "deny" in

order for the PAN products to literally infringe the "initially denied" limitation (which they do not), the PAN products still perform substantially the same function (i.e., processing/sorting packets in two phases) in substantially the same way (i.e., by applying a set of rules to all packets, and then applying a second set of rules to the packets that are not allowed or finally dropped during the first phase) to achieve substantially the same result (i.e., more efficient packet processing).

Because PAN's only non-infringement argument for the '347 patent lacks any legal or evidentiary basis, the Court should grant Juniper's motion for a judgment that PAN directly infringes Claims 1 and 24 of the '347 patent as a matter of law.

B. No Reasonable Jury Could Find That The Accused PAN Products Do Not Infringe Claims 1 And 6 Of The '612 Patent.

Juniper's evidence also establishes that PAN directly infringes Claims 1 and 6 of the '612 patent, and that no reasonable jury could find otherwise. Claim 1 of the '612 patent is a method claim describing a "dynamic" approach to network security (e.g., for a firewall) where new rules are added to a set of rules based on data extracted from a sequence of data units. *See* JTX 2 ('612 patent). Juniper submitted evidence that PAN infringes each element of Claim 1 by dynamically adding "rules" based on information it extracts from packets that are received by its products—functionality used in PAN features such as Custom Signatures and Reconnaissance Protection. These rules deny packets to and/or from certain IP addresses for varying amounts of time, and can also include other criteria such as zone or virtual system identifier. The rules are generated by PAN's products using a functionality known as "Block IP." *See, e.g.*, PTX-231-A (PAN Admin Guide 4.1) at 127, 151, 178-79; PTX 593-F; PTX 593-G; PTX 593-O; PTX 593-CC; 2/25/14 (Vol. B) Tr. (Rubin) at 303:22–307:21, 379:5–393:7, 394:18–396:18; 2/26/14 (Vol. C) Tr. (Rubin) at 579:21-24, 637:10–639:2, 643:22–644:2.

PAN's sole defense is that the Block IP rules identified by Juniper are not really "rules" under the patent, but instead a "lookup table" (which this Court has construed to fall outside the scope of the claims). The Court defined "rules" as "actions to be applied against packets, as distinct from a look-up table, which is a data structure that stores information." D.I. 258 at 23.

Nothing in this Court's construction of "rules" excludes blocking particular IP addresses for defined periods of time, and PAN failed to present any evidence that blocking packets from certain IP addresses is not an "action to be applied against packets." Instead, the parties agree that the Block IP rules are actions. PAN's expert testified that when the PAN products "put an IP address on the list" using PAN's Block IP functionality, "the result of that action that the PAN products take will be to stop further incoming bad packets [from that IP address]." 2/28/14 (Vol. E) Tr. (Mitzenmacher) at 1013:13–1014:1; *see also* PTX 231-A.

Nor has PAN presented any evidence supporting its theory that the Block IP rules are a "look-up table" (and thus excluded from infringement by the Court's construction of "rules"). To the contrary, it is uncontroverted that they are actions, not structures for holding data. Moreover, there was no evidence presented that the Block IP rules are even stored *in* a lookup table as defined by the '612 patent. The '612 patent defines "look-up table" as a table that "includes the IP address, port and protocol corresponding to each current application or service." JTX 2 ('612 Patent) at 5:18-20. PAN's expert argued only that the Block IP entries are maintained in a "hash table" (2/28/14 (Vol. E) Tr. (Mitzenmacher) at 991:9–993:9), providing no testimony that the table includes "the IP address, port and protocol corresponding to each current application or service," or bears any other similarity to the '612 patent look-up table excluded from the Court's construction. On the other hand, Juniper's expert Dr. Rubin provided uncontroverted testimony that the Block IP table does *not* include information about the port

numbers or protocol, or *any* information corresponding to individual applications or services (i.e., sessions). 2/25/14 (Vol. B) Tr. (Rubin) at 382:1 – 387:12. Instead, it contains the Block IP actions, which apply across multiple sessions.[2] Thus, there is no evidence to support a finding that the Block IP rules are a "look-up table" as identified in the '612 patent (or even that they are contained within a "look-up table")—which is PAN's only non-infringement argument.

This Court should also grant Juniper's motion for infringement of Claim 6. PAN's expert agrees that, if the PAN products infringe Claim 1, they also infringe Claim 6.[3] *Id*. at 979:7–980:21; *see also* 2/25/14 (Vol. B) Tr. (Rubin) at 398:20–406:3.

Even if the Court were to credit PAN's "look-up table" argument, it should still grant Juniper's motion because PAN has not submitted sufficient evidence to rebut Juniper's infringement claims under the doctrine of equivalents. Indeed, even if the rules in the Block IP table were not "rules" within the Court's construction (which they are), the PAN products still perform substantially the same function (i.e., dynamically creating rules) in substantially the same way (i.e., by using information about the packets that are received by the firewall to create new rules) to achieve substantially the same result (i.e., better network security). PAN failed to present sufficient evidence to demonstrate that its products would not satisfy this function-way-result test, in the event that they do not literally infringe the '612 patent.

Accordingly, the Court should grant Juniper's motion for judgment of infringement as a matter of law on Claims 1 and 6 of the '612 patent.

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[2] The parties have agreed that "rules" within the meaning of the '612 patent exist across multiple sessions. D.I. 258 at 23.

[3] Claim 6 depends on Claim 1, and adds the additional requirements that: (1) the network device is coupled to a private network and to a public network, (2) the headers of the data units include a network address and a port number that is associated with a firewall implemented at the network device, and (3) replacing the network address and port numbers with network addresses and port numbers that are associated with corresponding destination nodes in the private network. JTX 2 ('612 patent) at Claim 6.

C. No Reasonable Jury Could Find That The Accused PAN Products Do Not Infringe Claim 1 Of The '723 Patent.

Juniper's evidence also establishes that PAN directly infringes Claim 1 of the '723 patent, and no reasonable jury could find otherwise. Claim 1 of the '723 patent describes a system with three engines—a first engine to route the packet to the second engine and then route the packet to a third engine after receiving it from the second engine, a second engine to process the packet and associate a tag with the packet, and a third engine to process the packet using the information in the tag. JTX 7 ('723 patent) at Claim 1. Claim 1 further requires that the second engine and the third engine: (1) comprise an IDS, NAT or firewall engine, (2) be different, and (3) be included on a single integrated circuit. Juniper presented ample evidence that PAN infringes each element of Claim 1. *See, e.g.*, PTX 306 (Octeon Processor Packet Flow); PTX 593-V; PTX 593-N; PTX 593-U; PTX 593-EE; PTX 593-MM, PTX 593-KK; PTX 593-II; 2/26/14 (Vol. C) Tr. (Rubin) at 449:5–464:9, 466–485:7. PAN has advanced three non-infringement arguments with respect to Claim 1, each of which fails as a matter of law or is unsupported by sufficient evidence from PAN.

First, PAN contends that the packet is not routed to engines within the accused products. There is no evidentiary support for PAN's argument. Indeed, there is no dispute that the accused SSO engine delivers a pointer to a work queue entry ("WQE") (which further contains a pointer to a packet) in response to a "get work" request from one of the core processors on the Cavium chip. 2/27/14 (Vol. D) Tr. (Mitzenmacher) at 795:2-13, 801:1-6. Nevertheless, PAN argues that this does not count as "routing" a packet because the SSO delivers a pointer to a WQE, rather than a pointer to a packet, even though the WQE itself contains a pointer to the packet. Again, PAN's position is contrary to this Court's claim construction order, which expressly states that

"'routing' does not exclude the use of pointers." D.I. 258 at 33. As such, this non-infringement argument provides no basis for a reasonable jury to find non-infringement.

PAN's second argument—that the accused second engine (i.e., the Slowpath) does not associate a tag with a packet—is based on an effort to confuse what Juniper has identified as the "tag." PAN argues that the Slowpath does not associate the ***WQE*** with the packet. But this argument is irrelevant, as neither party has ever argued that the WQE is the "tag." PAN further argues that the "Session ID" is not a "tag" because it is a data value, not a structure for holding data. But once again, this argument is irrelevant because neither party has argued that the "Session ID" value alone is the "tag." Instead, Juniper's expert Dr. Aviel Rubin explained that the Session table entry is the "tag," and testified without contradiction that it is associated with the packet by the Slowpath and that it is a data structure. *See, e.g.,* 2/26/14 Tr. (Vol. C) Tr. (Rubin) at 472:2-5, 484:16-17, 651:20-22. Because PAN failed to present sufficient evidence to rebut Juniper's actual theory of infringement—i.e., that the Session table entry is a "tag" that is associated with the packet by the Slowpath—no reasonable jury could find that Juniper has not established infringement of this element.

PAN's final non-infringement argument is that the accused second and third engines are not different. To support this argument, PAN first points to the fact that both the Slowpath and Fastpath are part of the PAN-OS software. This fact—although true—is irrelevant because there is nothing in the ordinary meaning of "different" or in the Court's claim constructions that requires the engines to run more than one operating system. To the contrary, common sense supports the concept that two components or modules can plainly be "different" even if they are part of a larger whole (e.g., two different files stored in the same folder on a computer, or different fingers of a single hand). PAN next argues that the two engines are not different

because the Slowpath and Fastpath are both included on the same integrated circuit—i.e., the Cavium chip. But PAN's argument ignores entirely that the Cavium chip contains multiple processing cores (i.e., central processing units), and that the parties agree that the Slowpath and Fastpath can and do run on different processing cores. In fact, PAN's argument is contradicted by the claim language itself, which ***requires*** that the second and third engines "are included on one integrated circuit." JTX 7 ('723 patent) at Claim 1. Moreover, PAN's argument flies in the face of the plain and ordinary meaning of "processor," as the Court acknowledged during the trial. 2/28/14 (Vol. E) Tr. at 1039:9-13 ("[M]y impression from this testimony is that these witnesses considered the different cores to be different processors consistent with my understanding of how it might be interpreted to one of ordinary skill in the art."). Accordingly, no reasonable jury could find that the accused PAN products do not satisfy the "different" limitation.

But even if PAN were correct on any of its non-infringement arguments (which it is not), the Court should still grant Juniper's motion because PAN has not submitted sufficient evidence to avoid infringement under the doctrine of equivalents. Even if the claims did require that the SSO deliver the pointer to the packet directly (as opposed to indirectly through a nested pointer via the WQE), the PAN products still perform substantially the same function (i.e., delivering the packet to multiple processing engines) in substantially the same way (i.e., by using pointers) to achieve substantially the same result (i.e., providing each engine with access to the packet so that it can perform its processing). As another example, even if the Session tag was not a "structure for holding data" (which it is), the PAN products still perform substantially the same function (i.e., recording the results of the second engine's processing so that those results can be later used by the third engine) in substantially the same way (i.e., by putting the results in a location

that is accessible to the third engine) to achieve substantially the same result (i.e., information is recorded, associated with the packet and capable of being used by the third engine). As a final example, even if PAN were correct that the "different" limitation requires different software programs or different integrated circuits, the PAN products still perform substantially the same function (i.e., performing two types of processing) in substantially the same way (i.e., by using engines that perform different functions) to achieve substantially the same result (i.e., more efficient processing).

Accordingly, the Court should grant Juniper's motion for judgment as a matter of law of infringement of Claim 1 of the '723 patent.

IV. CONCLUSION

Juniper presented evidence at trial establishing that the accused PAN products running PAN-OS infringe each of the asserted claims. PAN presented no real contrary evidence, but instead tried to rewrite the language of the asserted claims and the Court's claim constructions to add new limitations. As a matter of law, it is irrelevant whether PAN practices the non-existent limitations it sought to add to the claims. PAN practices each and every limitation of the asserted claims and is liable for infringement. Juniper therefore respectfully requests that the Court grant its motion for judgment as a matter of law.

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March 4, 2014

CERTIFICATE OF SERVICE

I hereby certify that on March 4, 2014, I caused the foregoing to be electronically filed with the Clerk of the Court using CM/ECF, which will send notification of such filing to all registered participants.

I further certify that I caused copies of the foregoing document to be served on March 4, 2014, upon the following in the manner indicated:

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